

April 9, 1958

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CONNECTICUT STATE DEPARTMENT OF HEALTH

BUREAU OF ~~STATE~~ ENGINEERING

SUBJECT PLAINVILLE, CONN., CONFERENCE REGARDING
POLLUTION OF THE PLAINVILLE WATER COMPANY
GRAVEL PACKED WELLS

TO: Warren J. Scott, Chief
Sanitary Engineering Services

FROM: LeRoy W. Van Kleeck
Principal Sanitary Engineer

Mr. W.S. Wise, Director
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Plainville Water Co.
Plainville, Conn.
Marlin Rockwell Corp.
Plainville, Conn.

Document No. 7

On April 1, 1958 a conference was held at the Marlin-Rockwell Corporation regarding pollution to the gravel packed wells of the Plainville Water Company from detergents. Mr. John Appleyard, plant manager and Mr. Malcolm Berlind, plant engineer, together with several other technicians, represented the corporation. Officials of the Plainville Water Company were present and a representative from the Henry Souther Engineering Corporation, consultants for the Plainville Water Company. Mr. Clifford G. Carten, with Esbec Tumbling Division was present, representing the supplier of the detergents used by the Marlin-Rockwell Corporation. The corporation had also invited Mr. Max U. Priester, associate director of the consulting division of Betz Laboratories, Inc. Mr. Priester is an authority on industrial waste treatment. Accompanying Mr. Priester was Mr. Reynolds of the Betz Laboratories, Inc. In addition, members of the state water resources commission, the first selectman, Doctor Cook, local health director, and a number of others were present. In all, about twenty people attended this conference.

At Mr. Appleyard's request, the writer outlined the history of the difficulty and outlined the possible solutions. Mr. John Curry, chief engineer of the state water resources commission, discussed laboratory experiments in efforts to precipitate detergents with a view of attempting precipitation of the existing detergents in the Marlin-Rockwell Corporation lagoons. It appears that both alum and ferric chloride in dosages of about one to two pounds per thousand gallons may effectively float the detergents as sludge. The Betz Laboratories are to make further studies and the water resources commission to be advised as to whether they concur in a chemical precipitation procedure for removing detergents from the present lagoons of the Marlin-Rockwell Corporation. It was the consensus of opinion that if these detergents can be flocculated that the supernatant liquor or subnatant liquor will be drained to a third temporary lagoon and then discharged to the Quinnipiac River. The third lagoon will be used to catch any oils which may escape.

Studies will also be made by the Betz Laboratories as to a possible industrial waste plant. Use of the lagoons may be retained, however, particularly for sludge handling.

Another accomplishment of the conference was an immediate decision to stop the use of all synthetic detergents by the corporation, if at all possible. Mr. Carten has offered their so-called "Substitute No. 4", which contains light soda ash, sodium metasilicate, Tetrasodium pyro-phosphate and trisodium phosphate.

The above formulation contains no synthetic detergent and it is believed it will do a satisfactory washing job on the bearings. It will be a substitute for Esbec No. 1 compound, which contains 7% Naecanol DB, a synthetic detergent. Mr. Carten stated that probably the main difficulty will be acceptance of the new product by the men actually using the compound on the bearings. Mr. Appleyard stated that if the cleaning job is satisfactory, the employees will be required to use the new substitute.

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It was ascertained at this conference that the total industrial wastes at this concern probably is 20,000 to 25,000 g.p.d. This figure was of importance in consideration of other industrial waste treatment procedures.

Mr. Minor of the Plainville Water Company, stated that it is their plan to pump for a short period of time on each of the contaminated wells and to collect weekly samples for examination by the Henry Souther Engineering Company. In this way, the progress of removal of the detergents can be determined. There was some discussion on the possibility of pumping on the existing driven well points in the area between the Marlin-Roswell Company's lagoons and the service wells. The water would be pumped from these wells in an effort to remove the detergents in the ground water. It was not decided whether this would be done.

CONCLUSIONS

At this conference, the following accomplishments were made:

1. The company will discontinue the use of synthetic detergents.
2. Studies will be immediately undertaken by Bets Laboratories, Inc., the company's consultants, to see if the detergents in the existing lagoons can be precipitated and the supernatant or subnatant liquor discharged to the Quin-nipiac River.
3. Studies will be made and a report made to the corporation on alternate methods of handling the oils, acids, and washing compounds with or without the use of the present lagoons.

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